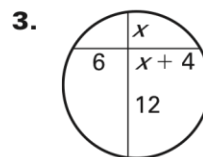
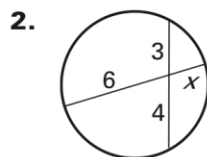
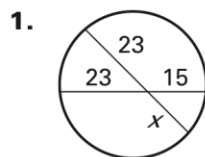


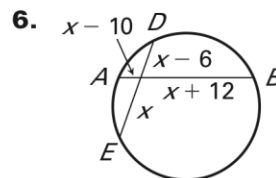
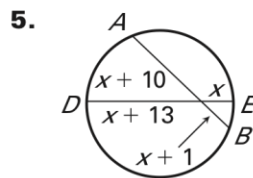
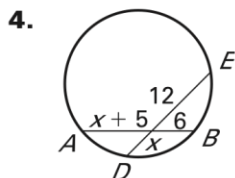
Name: \_\_\_\_\_ TP: \_\_\_\_\_

Failure to show all work and write in complete sentences will result in LaSalle!

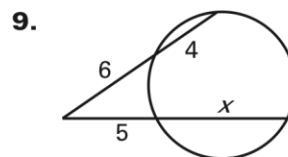
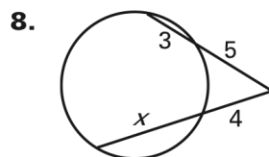
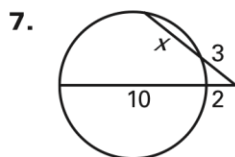
Find the value of  $x$ .



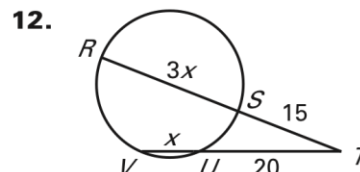
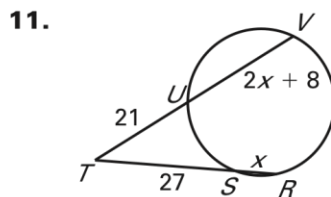
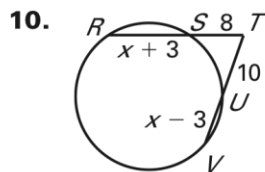
Find  $AB$  and  $DE$ .



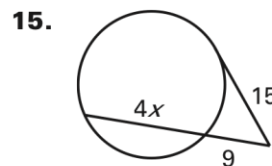
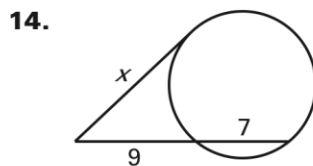
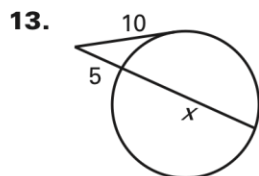
Find the value of  $x$ .



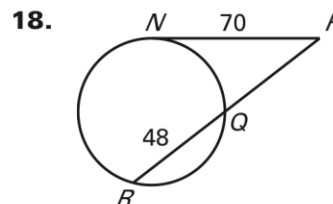
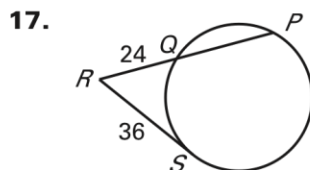
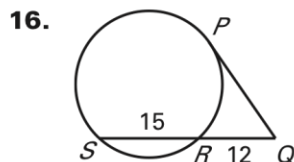
Find  $RT$  and  $TV$ .



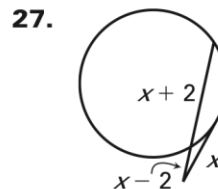
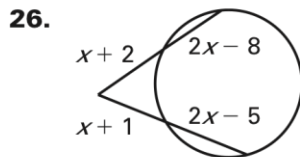
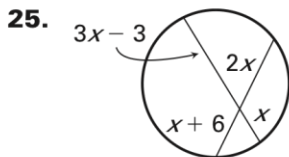
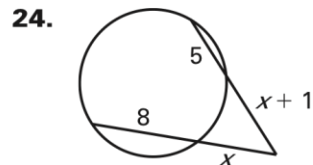
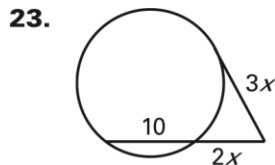
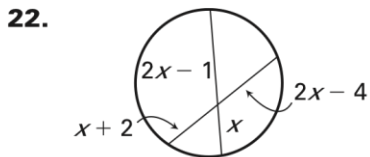
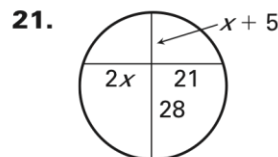
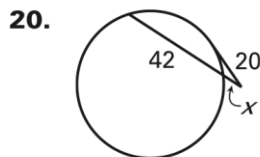
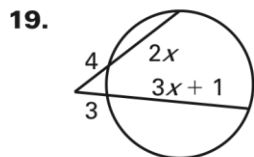
Find the value of  $x$ .



Find  $PQ$ .

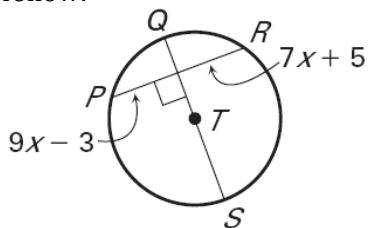


Find the value of  $x$ .



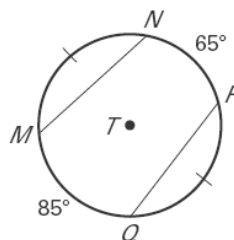
**Review of this Week:**

13) Use the figure below to answer the questions that follow.

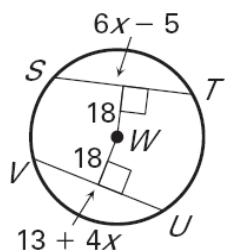


- Find the value of  $x$ .
- If  $PQ = 73^\circ$ , find  $QR$ .
- If  $PQ = 73^\circ$ , find  $PSR$ .

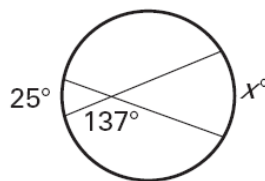
14) Find the measure of arc  $MN$ .



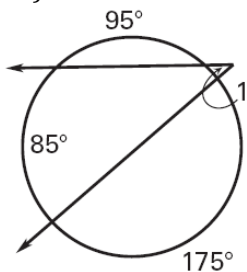
15) Find the length of  $ST$  in the figure below.



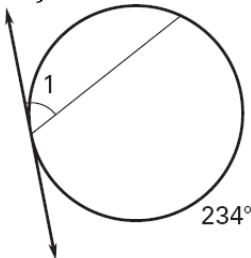
16) Find the value of  $x$ .



17) Find the measure of angle 1.



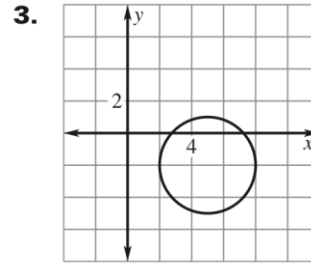
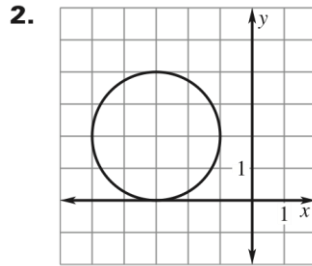
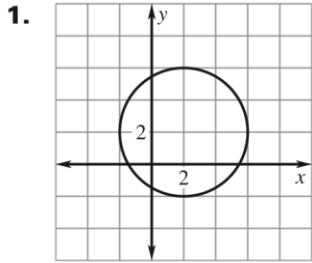
18) Find the measure of angle 1.



Name: \_\_\_\_\_ TP: \_\_\_\_\_

**Failure to show all work and write in complete sentences will result in LaSalle!**

**Write the standard equation of the circle.**



**Write the standard equation of the circle with the given center and radius.**

4. Center (4.1, 2.5), radius 3

5. Center (3.7, -6.2), radius 5

**Use the given information to write the standard equation of the circle.**

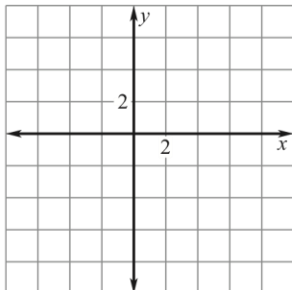
8. The center is (1, 3), and a point on the circle is (-4, 15).

9. The center is (-5, -2), and a point on the circle is (7, 14).

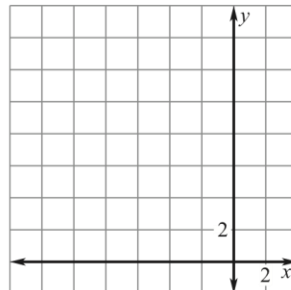
10. The center is (-1, 2), and a point on the circle is (47, 16).

**Graph the equation.**

11.  $(x - 3)^2 + (y + 4)^2 = 16$



12.  $(x + 5)^2 + (y - 7)^2 = 25$

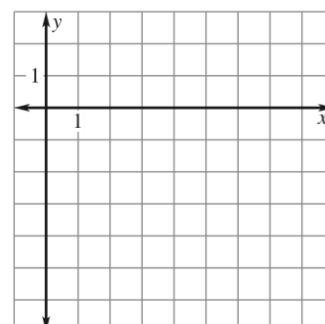
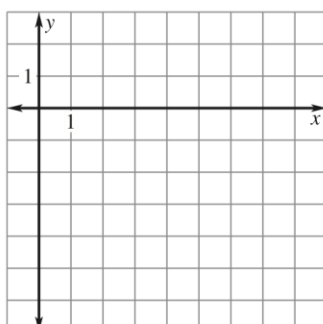
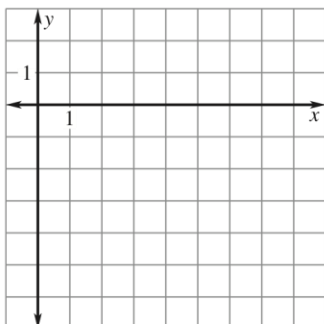


**Graph the circle  $(x - 4)^2 + (y + 2)^2 = 16$  and the line with the given equation. Determine whether the line is a tangent or secant. Explain.**

13.  $y = x - 2$

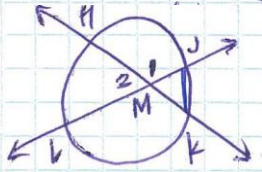
14.  $y = 2$

15.  $y = -x + 6$



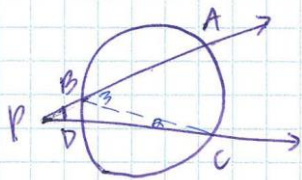
16) Use your notes to re-work the proof for this property:

Given:  $\overleftrightarrow{HK}$  &  $\overleftrightarrow{JL}$  intersect @  $M$   
 Prove:  $m\angle 1 = \frac{1}{2}(m\widehat{JH} + m\widehat{LK})$



17) Use your notes to re-work the proof for this property:

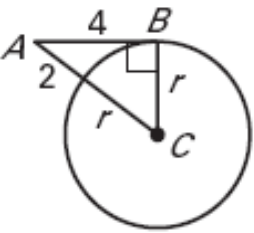
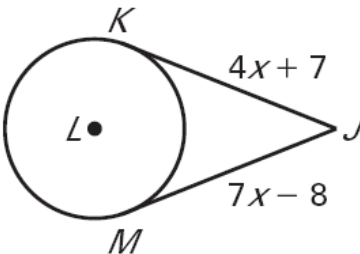
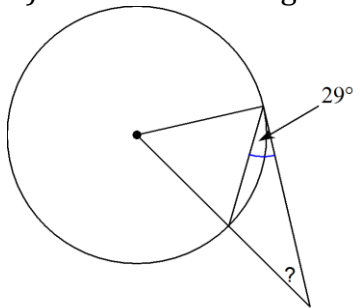
Given: Secants  $\overleftrightarrow{PA}$  and  $\overleftrightarrow{PC}$   
 Prove:  $m\angle 1 = \frac{1}{2}(m\widehat{AC} - m\widehat{BD})$



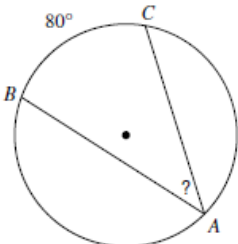
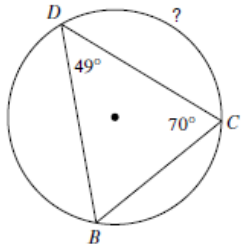
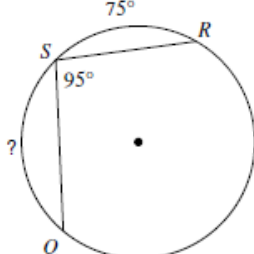
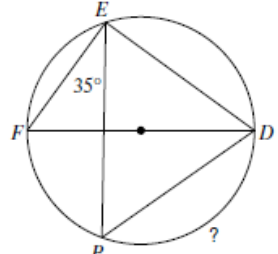
Name: \_\_\_\_\_ TP: \_\_\_\_\_

**Failure to show all work and write in complete sentences will result in LaSalle!**

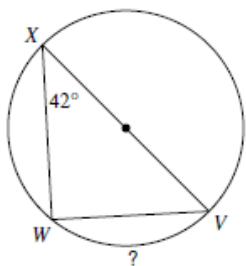
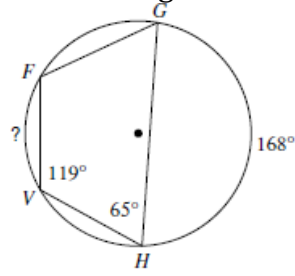
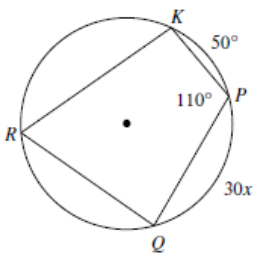
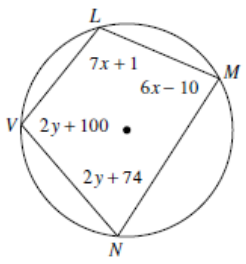
**CW79H – Properties of Tangents:**

<p>1) Find the radius, <math>r</math>.</p> 	<p>2) Find <math>x</math>.</p> 	<p>3) Find indicated angle.</p> 
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**CW80H – Inscribed Angles:**

<p>4) Find measure of indicated angle:</p> 	<p>5) Find measure of indicated angle:</p> 	<p>6) Find measure of indicated angle:</p> 	<p>7) Find measure of indicated angle:</p> 
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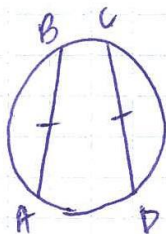
**CW81H – Inscribed Polygons:**

<p>8) Find measure of indicated angle:</p> 	<p>9) Find measure of indicated angle:</p> 	<p>10) Solve for <math>x</math>:</p> 	<p>11) Solve for <math>x</math> and <math>y</math>:</p> 
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## CW82 & 83H - Properties of Chords:

Property #15

If two corresponding chords are congruent either in the same circle or in two congruent circles, then their minor arcs are congruent.



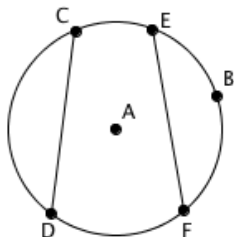
$$\overline{BA} \cong \overline{CD} \text{ if } \widehat{BA} \cong \widehat{CD}$$

$$\widehat{BA} \cong \widehat{CD} \text{ or } \widehat{BA} \cong \widehat{CD}$$

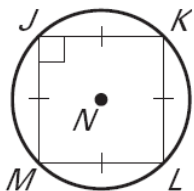
### Proof:

**Given:** CD and EF are chords.

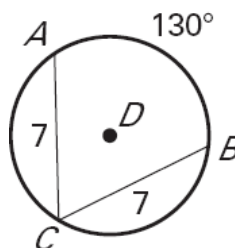
**Prove:** Arc CD is congruent to Arc EF



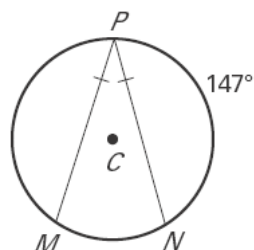
1) Find  $m\angle M$ .



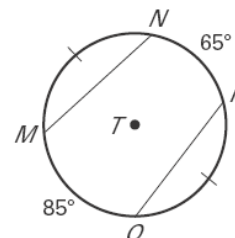
2) Find the measure of arc AC.

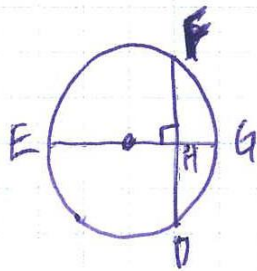


3) Find the measure of arc MN.



4) Find the measure of arc MN.



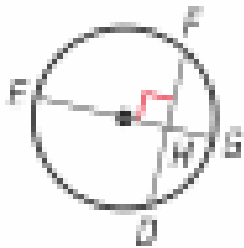


If  $\overline{EG}$  is the diameter, and  $EG \perp DF$  then  $FH \cong DH$  and  $\text{arc } FG \cong \text{arc } DG$ .

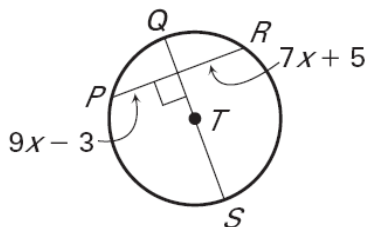
**Proof:**

**Given:** EG is the diameter and  $EG \perp DF$

**Prove:**  $FH \cong DH$  and  $\text{arc } FG \cong \text{arc } DG$



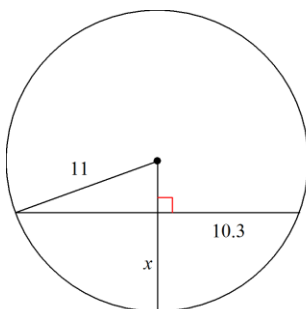
5) Use the figure below to answer the questions that follow.



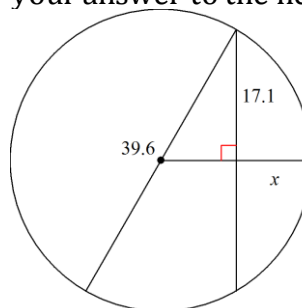
- Find the value of  $x$ .
- If  $PQ = 73^\circ$ , find  $QR$ .
- If  $PQ = 73^\circ$ , find  $PSR$ .

6)

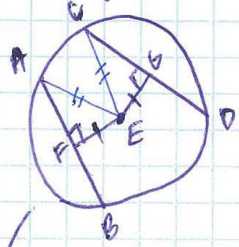
7) Find the length of the segment indicated. Round your answer to the nearest tenth if necessary.



8) Find the length of the segment indicated. Round your answer to the nearest tenth if necessary.



### Property #3



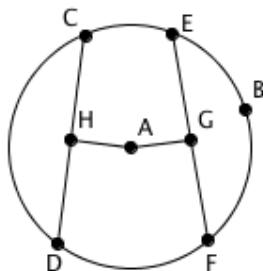
Two chords ~~are~~ AB and CD are congruent  
if  $EF \cong EG$ .

So, ~~the~~  $\overline{EF} \cong \overline{EG}$  and  $\overline{AB} \cong \overline{CD}$ .

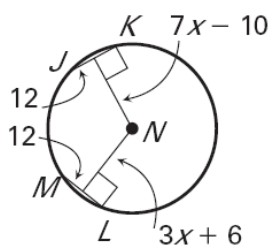
### Proof:

Given: AH is congruent to AG, AG is perpendicular to EF and AH is perpendicular to CD.

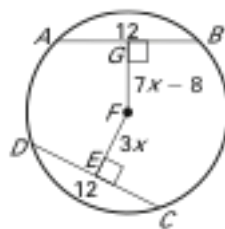
Prove: Chords CD and EF are congruent.



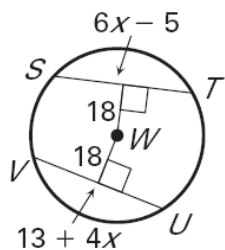
9) Find the value of  $x$  in the figure below:



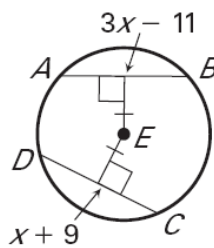
10)  $AB = CD = 12$ . Find EF.



11) Find the length of ST in the figure below.

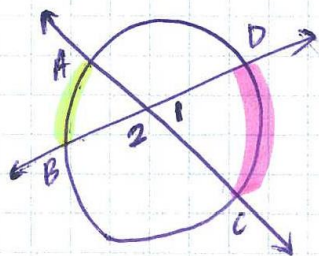


12) Find the value of  $x$  in the figure below.





**CW#84H - Angle Properties:**



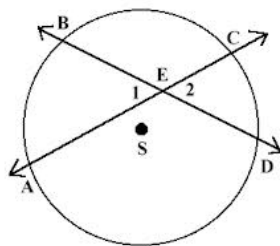
$$m\angle 1 = \frac{1}{2}(m\widehat{DC} + m\widehat{AB})$$

$$m\angle 2 = \frac{1}{2}(m\widehat{AD} + m\widehat{BC})$$

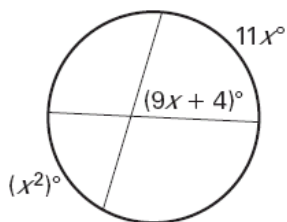
**Proof:**

**Given:** BD and AC are secants of circle E.

**Prove:**  $m\angle 2 = \frac{1}{2}(m\widehat{BA} + m\widehat{CD})$



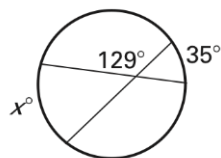
13) Find the value of  $x$ .



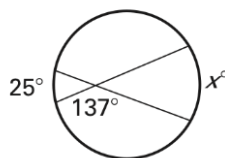
14) Find the measure of angle 1.

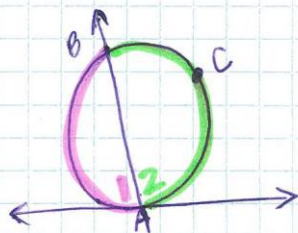


15) Find the value of  $x$ :



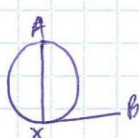
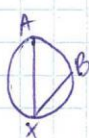
16) Find the value of  $x$ :





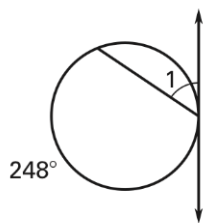
$$m\angle 1 = \frac{1}{2} m\widehat{AB}$$

$$m\angle 2 = \frac{1}{2} m\widehat{ACB}$$

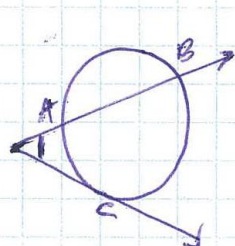
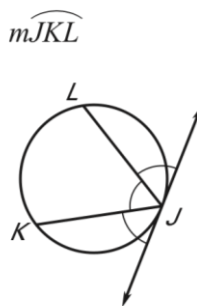


As chord  $\overline{AB}$  moves clockwise we see intercepted arc increases to the point  $\overline{AB}$ .

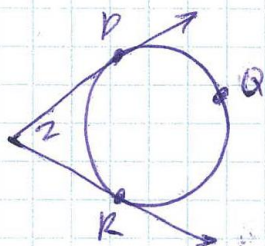
17) Find the measure of angle 1.



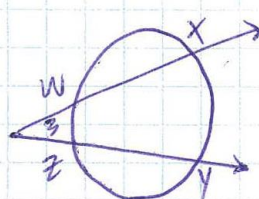
18)



$$m\angle 1 = \frac{1}{2} (m\widehat{BC} - m\widehat{AC})$$



$$m\angle 2 = \frac{1}{2} (m\widehat{QR} - m\widehat{PR})$$

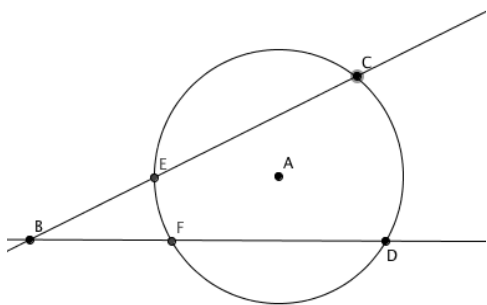


$$m\angle 3 = \frac{1}{2} (m\widehat{XY} - m\widehat{WZ})$$

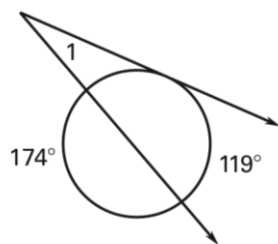
**Proof:**

**Given:** BC and BD are secants of circle A.

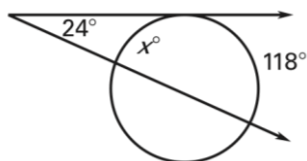
**Prove:**  $m\angle EBF = \frac{1}{2} (m\widehat{CD} - m\widehat{EF})$



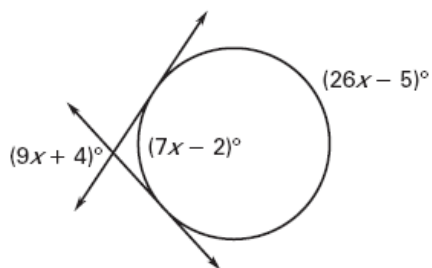
17) Find the measure of angle 1



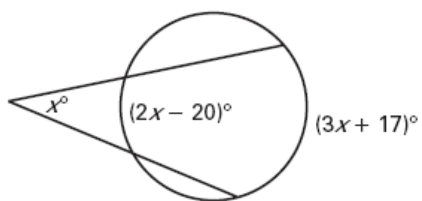
18) Find the value of  $x$ :



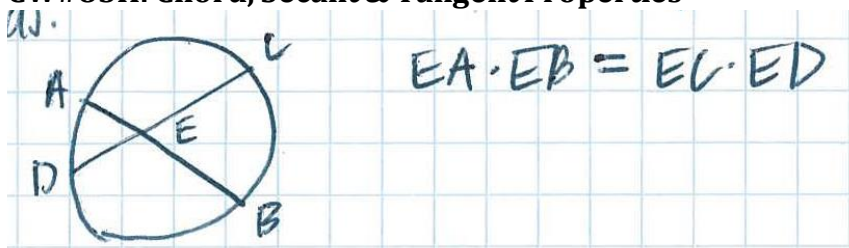
19) Find the value of  $x$ .



20) Find the value of  $x$ .



### CW#85H: Chord, Secant & Tangent Properties

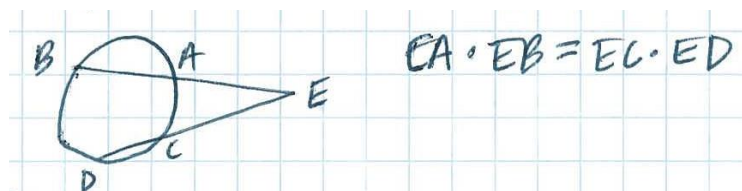


#### **Proof:**

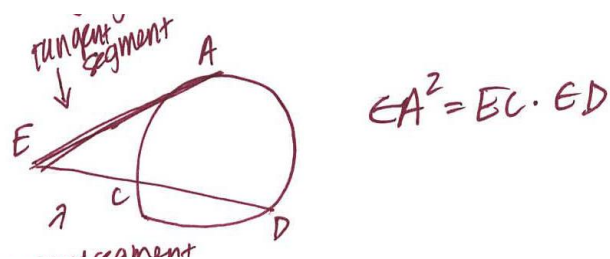
Given: Chords AB and CD intersect at E

Prove:  $EA \cdot EB = EC \cdot ED$

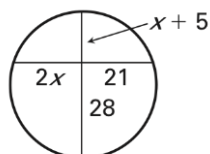
Two Secants:



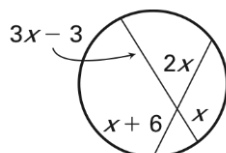
Secant and TANGENT:



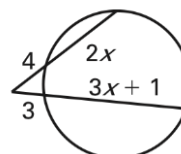
21) Find the value of x:



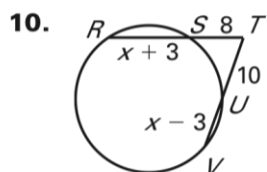
22) Find the value of x:



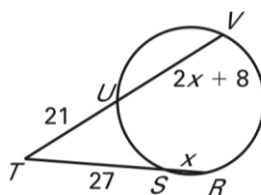
23) Find the value of x:



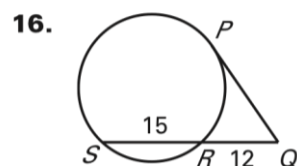
Find  $RT$  and  $TV$ .



11.



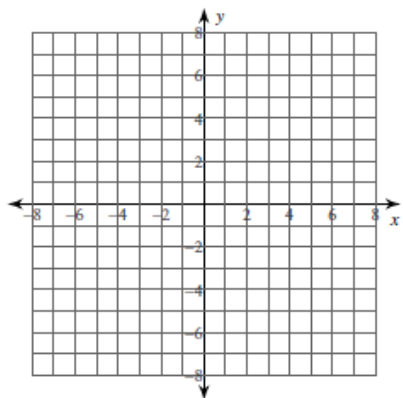
Find  $PQ$ .



CW86H - Write and graph equations of circles:

Identify the center and radius of each. Then sketch the graph.

1)  $(x-1)^2 + (y+3)^2 = 4$



2)  $(x-2)^2 + (y+1)^2 = 16$

